# California Load Serving Entities Retail Electricity Price Outlook 2003-2015

***2005 Integrated Energy Policy Report***
***(2005 Energy Report)***
***Docket 04-IEP-01***

**<u>Staff Data Request</u>**

**Ruben Tavares**
**Electricity Analysis Office**
**California Energy Commission**
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# Items to Discuss

1. Why Make Electricity Rate Projections

2. Typical IOU/Municipal Customer

3. Present Rates

4. Projections:

    a) Generation Cost

    b) Non-Generation Cost

# 1. Why Make Electricity Rate Projections

Rates = Prices = Average Revenue (IOU/Muni) = Average Cost (Customer).

Methodology → Work in Progress

Annual electricity rate projection is an input to:

- Demand forecast, building efficiency standards
- Cost/benefit analysis of energy efficiency and cogeneration projects
- Budget estimates of public agencies
- Other (i.e. academic studies)

# 2. Typical Customer

## Monthly characteristics of an IOU/Municipal typical customer in 2003 IEPR:

| TABLE 1 | | | | | |
|---|---|---|---|---|---|
| | Residential | Small Commercial | Medium Commercial | Industrial | Agricultural |
| Usage kWh | 500 | 1,241 | 21,863 | 735,305 | 5093 |
| Load Factor % | NA | 47 | 50 | 83 | 35 |
| Max. Demand | NA | 3.6 | 60 | 1,217 | 20 |

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- **Staff estimated consumption for typical customer.**
- **Staff also used load profiles (load factors)**
- **Each utility has its own definition of a typical customer. Staff to evaluate for use in 2005 Energy Report**

**Cont.**

- **IOUs have numerous rate schedules (i.e. PG&E residential ~20)**

- **Rate schedule/customer class considered in 2003 IEPR:**

| TABLE 2 | | | | | |
|---|---|---|---|---|---|
| Utility (IOU) | Residential | Small Commercial | Medium Commercial | Industrial | Agricultural |
| PG&E | E-1 | A-1 | A-10 | E-20 | AG-1 (B) |
| SCE | D | GS-1 | DS-2 | TOU-8 | PA-1 |
| SDG&E | DR | A | AL-TOU | A6-TOU | PA |

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- **Most consumption occurs in these rate schedules (i.e. residential 70-80%)**

# Cont.

Municipal utilities have fewer rate schedules than IOUs. Staff used the following rate schedules in 2003 IEPR.

**TABLE 3**
**Municipal Rate Schedules Representing Customer Classes**

| Municipal | Residential | Small Commercial | Medium Commercial | Industrial | Agricultural |
|---|---|---|---|---|---|
| **LADWP** | R-1 | A-1 | A-2 | A-3 | N/A |
| **SMUD** | R | GS-27 | GS-47 | GS-TOU | AS-63 |
| **Burbank** | R | C | C | P | N/A |
| **Glendale** | L-1 | L-2 | LD-2 | PC-1-B | N/A |
| **Pasadena** | D | G-1 | P | P | N/A |

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**Staff will evaluate and include more rate schedules in 2005 Energy Report to more accurately represent a customer class for IOUs, municipal utilities, irrigation districts, energy service providers, and community choice aggregators.**

# 3. Present Rates

- **Present Rates → Average Revenue/kWh**
- **Residential: Basic charge, kWh baseline allocations, and other charges for each (five tiers).**

TABLE 4
Edison 2003 Average Residential Electricity Rate
cents/kWh

| | Summer | Winter | Average |
|---|---|---|---|
| Transmission | 0.395 | 0.395 | 0.395 |
| Distribution | 1.689 | 5.807 | 3.748 |
| Nuclear Decommissioning | 0.066 | 0.066 | 0.066 |
| Public Purpose Programs | 0.349 | 0.349 | 0.349 |
| TRBAA | (0.062) | (0.062) | (0.062) |
| PURCF | 0.012 | 0.012 | 0.012 |
| TTA | 1.222 | 1.222 | 1.222 |
| Generation | 10.167 | 6.778 | 8.472 |
| Basic Charge | 0.198 | 0.198 | 0.198 |
| | | | |
| Total Average Rate | 14.036 | 14.765 | 14.401 |
| | | | |

Note: Table includes all charges to five tiers

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# TABLE 5
# LADWP 2003 Average Residential Electricity Rate
# $/kWh

| Residential | LADWP | $ |
|---|---|---|
| Rate Schedule R-1 | a) Service Charge/Mo | 0.30 |
| | | |
| | Energy Charge $/kWh | 0.07288 |
| | ECA $/kWh | 0.02940 |
| | ESA $/kWh | 0.00147 |
| | b) Subtotal | 0.10375 |
| | | |
| Consumption | c) 500 kWh/month | |
| | | |
| Total Monthly Bill | d) Charge [bxc]+a | 52.18 |
| | | |
| Average Revenue/kWh | (d/c) | 0.10435 |

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**Cont.**

- **Average present rates for other customer classes include energy surcharges (CTC, DWR Bond, etc., for IOUs) and demand, customer, energy, and meter charges.**
- **IOUs and municipal utilities list rate components differently in their tariffs.**
- **PG&E includes reliability services in the transmission charge.  Edison separates the charge in tariffs.**
- **Municipal utilities include a charge for rate stabilization, but is not listed in tariffs**

# 4. Projections

LSEs must provide data according to each entity's best assessment of revenue requirements for the forecast period 2003-2015. LSEs must provide workpapers and assumptions made.

LSEs must also describe methodology used to allocate revenues among customer classes and rate schedules for the forecast period 2003-2015. LSEs must provide workpapers and assumptions made.

For example, CPUC is currently adopting Marginal Cost methodologies to allocate revenue among customer classes and rate schedules.

Future rates will reflect generation and non-generation costs allocated to customer classes and rate schedules

a) Generation Cost:

Components of generation cost include Utility Retained Generation (URG = nuclear, QF and hydro), DWR contracts, Renewable Portfolio Standard (RPS), Bilateral Contracts, Spot Market Purchases, and Others.

b) Non-Generation Cost

Transmission, Distribution, Nuclear Decommissioning, Trust Transfer Amount (TTA, expires in 2007), Regulatory Asset, and Others.